

**METHOD OF FORMING SEMICONDUCTOR DEVICES USING AN ETCH
STOP LAYER**

Abstract of the disclosure

5 Methods of forming a semiconductor device are provided by forming a gate
pattern that includes a gate electrode on a substrate. Lightly doped impurity diffusion
layers are formed in the substrate at both sides of the gate pattern. Spacers are formed
on sidewalls of the gate pattern. The spacers having a bottom width. Impurity ions
are implanted using the gate pattern and the spacer as a mask to form a heavily doped
10 impurity diffusion layer in the substrate. The spacers are removed. A conformal etch
stop layer is formed on the gate pattern and the substrate. The etch stop layer is
formed to a thickness of at least the bottom width of the spacers.